REMARKS/ARGUMENTS

1.)   Claim Amendments

Claims 8, 10-12, 19, 21-23, and 26-29 are pending in the application.   The Applicant has amended claims 8, 19, and 26-29.   Claims 1-7, 9, 13-18, 20, 24, and 25 have been canceled.   Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.)   Claim Rejections – 35 U.S.C. § 112

On page 2 of the Office Action, the Examiner rejected claims 6, 8, 18, and 19 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement since dependent claims 6 and 18 were not compatible with base claims 26 and 27.   The Applicant has canceled claims 6 and 18.   Claims 8 and 19 have been amended to depend directly from base claims 26 and 27, respectively.   Therefore, the withdrawal of the § 112 rejection of claims 8 and 19 is respectfully requested.

3.)   Claim Rejections – 35 U.S.C. § 112

On page 3 of the Office Action, the Examiner rejected claims 6, 8, 18 and 19 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement since dependent claims 6 and 18 were not compatible with base claims 26 and 27.   The Applicant has canceled claims 6 and 18.   Claims 8 and 19 have been amended to depend directly from base claims 26 and 27, respectively.   Therefore, the withdrawal of the § 112 rejection of claims 8 and 19 is respectfully requested.

4.)   Claim Rejections – 35 U.S.C. § 103(a)

On Page 4 of the Office Action, the Examiner rejected claims 26 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Edsall, et al. (US Patent No. 6,741,592 B1) in view of The Cisco 7600 Optical Services Router Software Command Reference (Author Unknown, The Cisco 7600 Optical Services Router Software Command Reference, 31 December 2001, Pages 28-29), Sackett (George Sackett, Interworking SNA with Cisco Solutions, Cisco Press, 19 February 1999, Pages 1-5) and the IEEE

802.1Q Standard (Author Unknown, IEEE standards for local and metropolitan area networks: virtual bridged local area networks, IEEE Std 802.1Q-1998, 8 March 1999, Pages 146-147). The Applicant respectfully disagrees for the reasons discussed below.

In the Applicant's previous response, the Applicant pointed out that Edsall does not disclose the second embodiment of the invention, which is now exclusively claimed. Edsall does not say anything about a "proxy ARP", but the Examiner contends these are shown by the Cisco 7600 Command Reference. The Applicant noted that the claimed proxy ARP is a "*modified* proxy ARP", which is different from the proxy ARP disclosed in RFC 925 and the 7600 Command Reference. The Examiner has cited the additional references, Sackett and IEEE 802.1Q, for showing the remaining features associated with the modified proxy ARP. The Applicant respectfully disagrees that Sackett and IEEE 802.1Q teach or suggest a modified ARP proxy with the functionality of the modified ARP proxy as described in the specification. The Applicant has amended independent claims 26-29 to more completely describe the modified ARP proxy functionality, as described on page 19, line 17 through page 20, line 21 of the specification.

In regular ARP proxying, as described in RFC 925, "Multi-LAN Address Resolution", the ARP proxy agent repeats a received ARP request on the LANs to which it is attached (except the LAN on which the ARP request was received) and does not reply to the ARP request until it has received an ARP reply from the actual target host. The ARP proxy then returns the address of the target host to the requesting host.

The functionality of the claimed modified ARP proxy agent, which is implemented in the access router, is different in several respects. First, the access router does not repeat a received ARP request on the LANs to which it is attached to discover the presence of the target host. Instead it utilizes internal information to determine that the target host is present on the subnet. Second, the access router does not return the address of the target host to the requesting host. Instead, it sends its own MAC address to the requesting host. Thereafter, when the requesting host desires to send an IP packet to the target host, the requesting host encapsulates the IP packet in an Ethernet frame with the MAC address of the access router as the destination address. Upon receiving the Ethernet frame, the access router utilizes the internal information,

which includes reliable IP-address-to-MAC-address mapping information (other than the ARP cache), to obtain the MAC address of the target host. The access router then forwards the IP packet to the target host. The internal IP-address-to-MAC-address mapping information may vary with the circumstances of the access network. In particular it may be different in a fixed access network and a WLAN access network.

None of the cited references, alone or in combination, teach or suggest an access router with a modified ARP proxy agent that performs these steps. Therefore, the withdrawal of the § 103 rejection and the allowance of amended claims 26 and 27 are respectfully requested.

On Page 15 of the Office Action, the Examiner rejected claims 10, 11, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Edsall, et al. (US Patent No. 6,741,592 B1), The Cisco 7600 Optical Services Router Software Command Reference (Author Unknown, The Cisco 7600 Optical Services Router Software Command Reference, 31 December 2001, Pages 28-29), Sackett (George Sackett, Interworking SNA with Cisco Solutions, Cisco Press, 19 February 1999, Pages 1-5) and the IEEE 802.1Q Standard (Author Unknown, IEEE standards for local and metropolitan area networks: virtual bridged local area networks, IEEE Std 802.1Q-1998, 8 March 1999, Pages 146-147) as applied to claims 26 and 27, Supra, and further in view of Sistanizadeh, et al. (US Patent No. 6,101,182).

The Applicant respectfully submits that the amendments to base claims 26 and 27 also distinguishes the invention from the combination of Edsall, the 7600 Command Reference, Sackett, IEEE 802.1Q, and Sistanizadeh. Sistanizadeh was cited for suggesting the retrieval of address information by an access router during authentication. However, like the other references, Sistanizadeh also fails to teach or suggest an access router with a modified ARP proxy as claimed in base claims 26 and 27. Therefore, the allowance of claims 10, 11, 21, and 22 is respectfully requested.

On Page 16 of the Office Action, the Examiner rejected claims 12 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Edsall, et al. (US Patent No. 6,741,592 B1), The Cisco 7600 Optical Services Router Software Command Reference (Author

Unknown, The Cisco 7600 Optical Services Router Software Command Reference, 31 December 2001, Pages 28-29), Sackett (George Sackett, Interworking SNA with Cisco Solutions, Cisco Press, 19 February 1999, Pages 1-5) and the IEEE 802.1Q Standard (Author Unknown, IEEE standards for local and metropolitan area networks: virtual bridged local area networks, IEEE Std 802.1Q-1998, 8 March 1999, Pages 146-147) as applied to claims 26 and 27, Supra, and further in view of Yamaya, et al. (US Pre Grant Publication No. 2002/0184387).

The Applicant respectfully submits that the amendments to base claims 26 and 27 also distinguishes the invention from the combination of Edsall, the 7600 Command Reference, Sackett, IEEE 802.1Q, and Yamaya. Yamaya was cited for suggesting the use of redundant routers on the same VLAN. However, like the other references, Yamaya also fails to teach or suggest an access router with a modified ARP proxy as claimed in base claims 26 and 27. Therefore, the allowance of claims 12 and 23 is respectfully requested.

On Page 17 of the Office Action, the Examiner rejected claims 28 and 29 under 35 U.S.C. § 103(a) as being unpatentable over RFC 3069 (D. McPherson and B. Dykes, Request For Comments 3069, February 2001, Pages 1-7) in view of The Cisco 7600 Optical Services Router Software Command Reference (Author Unknown, The Cisco 7600 Optical Services Router Software Command Reference, 31 December 2001, Pages 28-29), Sackett (George Sackett, Interworking SNA with Cisco Solutions, Cisco Press, 19 February 1999, Pages 1-5) and the IEEE 802.1Q Standard (Author Unknown, IEEE standards for local and metropolitan area networks: virtual bridged local area networks, IEEE Std 802.1Q-1998, 8 March 1999, Pages 146-147).

The Applicant has amended the claims to better distinguish the claimed invention from RFC 3069, the 7600 Command Reference, Sackett and IEEE 802.1Q. As discussed above, none of these references teach or suggest an access router that includes a modified ARP proxy agent with the claimed characteristics. The 7600 Command Reference discloses only a standard ARP proxy. Likewise, Sackett discloses only standard ARP proxy operations, but not the modified operations recited in claims 28 and 29. RFC 3069 and IEEE 802.1Q also fail to disclose or suggest such a

modified ARP proxy agent. Therefore, the allowance of amended claims 28 and 29 is respectfully requested.
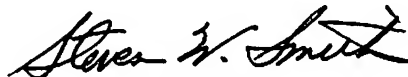
5.)   Prior Art Not Relied Upon

On Page 26 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure. However, the Applicant's reading of these references has revealed only suggestions of standard "local ARP proxy" operation.

6.)   Conclusion

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 8, 10-12, 19, 21-23, and 26-29.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would expedite the prosecution of the Application.

Respectfully submitted,

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Steven W. Smith
Registration No. 36,684

Ericsson Inc.
6300 Legacy Drive, M/S EVR 1-C-11
Plano, Texas 75024

(972) 583-1572
steve.xl.smith@ericsson.com